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ISOLATION OF SOME PATHOGENIC BACTERIA AND *CANDIDA ALBICANS* FROM STUDENT ACCESSORIES AND WATCHES AS PART OF BIOSAFETY IN MEDICAL LABORATORIES

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ABSTRACT : Rings, bracelets, necklaces and watches are tools that may cause contamination of medical laboratories in the universities, especially when the students wear them. All 250 swabs from students toiletries (wrist bonds, rings and the necklaces) were cultured on enriched and selective culture media to isolate and identify the bacteria.The sensitivity of isolated bacteria to different antibiotics were examin. 150 microbial isolates were isolated from student's accessories, 135 bacterial isolates and 17 isolates of *Candida albicans*. The bacteria that isolated were *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus pyogenes*, *Escherichia coli*, *Proteus mirabilis*, *Proteus vulgaris*, *Bacillus subtitis*, *Pseudomonas aeruginosa* and *Enterococcus faecalis*. According to the results, the students should remove the accessories, and watches at work in the laboratories. Therefore, an important condition must be set for the students before entering the medical laboratory, which is to remove all accessories tools before starting laboratory work to avoid microbial contamination.

Key words : Microbial contamination, biosafety, resist antibiotics.

INTRODUCTION

Many students in Iraqi universities wear silver, gold and metal accessories (necklaces, bracelets, rings, etc.) and enter the medical and scientific laboratories for culturing and diagnosis of microorganisms or for the purpose of training them to conduct various laboratory tests such as examining clinical samples like (blood, urine, etc.). Few studies done on this field; the researchers had been isolated the bacteria from the skin under rings and watches of dentists. They were isolated different species of microflora on the skin, under the rings and watches comparing with control group that have not worn ring and watches (Field *et al*, 1996).

A number of medical researchers reported that the jewelry may have different microorganisms. But in 2009, the Centers of Disease Control (CDC) and World Health Organisms (WHO) never put any recommendation about the role jewelry and watches in microbial diseases transmission (WHO, 2009) because this subject need to more studies and investigations. After 2009, the microbiologist have reported and proven that bracelets, watches and rings wore pathogenic bacteria and fungi, of poor persons or have hygiene and this studied with fluorescent trail (Hautemaniere *et al*, 2010). In Spanish hospital, 93% of those worn watches and bracelets were missed lines or areas on the wrist (Roman, *et al*., 2011). Also, Alp *et al* (2006) found that the hands of 379 workers which worn jewelry like (rings, bracelets and watchers) at Dutch hospital had pathogenic bacteria (Alp *et al*, 2006).

No previous study was conducted at AL-ESRAA University College, Baghdad, related with the identification of bacteria and *Candida albicans* from student's accessories and watches. So, the aims of this study were to isolation and identification of bacteria from student accessories and watches as part of biosafety in medical laboratories and study their sensitivity to various antibiotics.

MATERIALS AND METHODS

Sample collection

250 swabs of student's accessories (Silver and